

# VU Research Portal

## **“It feels like there are hooks inside my chest”: The Construction of Narrative Absorption Experiences Using Image Schemata**

Bálint, Katalin; Tan, Ed S.

### ***published in***

Projections: The Journal for Movies and Mind  
2015

### ***DOI (link to publisher)***

[10.3167/proj.2015.090205](https://doi.org/10.3167/proj.2015.090205)

### ***document version***

Peer reviewed version

[Link to publication in VU Research Portal](#)

### ***citation for published version (APA)***

Bálint, K., & Tan, E. S. (2015). “It feels like there are hooks inside my chest”: The Construction of Narrative Absorption Experiences Using Image Schemata. *Projections: The Journal for Movies and Mind*, 9(2), 63-88.  
<https://doi.org/10.3167/proj.2015.090205>

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)



---

# “It feels like there are hooks inside my chest”

## The Construction of Narrative Absorption Experiences Using Image Schemata

Katalin Bálint and Ed S. Tan

**Abstract:** Narrative absorption is a spontaneous temporary change in the state of consciousness due to an exceptionally intense awareness of a fictional narrative. This article investigates the experiential level of narrative absorption, namely what it is like to be absorbed in a cinematic or printed narrative. Following a cognitive linguistic approach the article assumes that in order to establish understanding of the experiential level of narrative absorption it is necessary to examine how people express their experience. The article proposes that the concept of image schema is a fruitful way to represent the content of viewers' and readers' consciousness so as to identify relevant mental schemata of absorbed narrative experiences. To generate rich descriptions of narrative absorption an interview study was conducted. The interviews qualitatively employing the image schemas as the system of the thematic analysis were examined for this research. The Centre-Periphery, Container, and the Source-Path-Goal schemas provide deeper insight into the nature and structure of recurring embodied patterns of absorption with fictional narratives.

**Keywords:** cognitive linguistic approach, container schema, embodied cognition, fictional narratives, image schema, narrative absorption

*“And Tweety Bird runs and gets a bowling ball and drops it [down] the drainpipe”*

*“Iconic: showing Tweety shoving bowling ball down.” (McNeill 1992: 191, example 7.16–7.17)*

The quote is one of David McNeill's descriptions of gestures made by people retelling a cartoon movie sequence.<sup>1</sup> It is part of his analysis of how people use their hands to communicate a narrative experience they had. It illustrates how in retelling a film sequence a multimodal embodied representation is

***The present study makes use of people's capacity to deliver an account of particular narrative experiences that are dear to them, namely describe what it is like to be absorbed by a fictional story.***

constructed in the recipient's awareness, somewhat similar to that of the teller during the actual Tweety sequence. People seem to be able to share the experience they had when viewing an attractive film, moreover, they find fun in retelling because listeners enjoy it likewise. This article makes use of people's capacity to deliver an account of particular narrative experiences that are dear to them, namely describe what it

is like to be absorbed by a fictional story. It explores mental models used in constructing the experience and conveying it to others.

As an investigation of the film experience the present paper draws on a rich tradition. The apparent realism of film images has been regarded as the key to the film experience in classical film theory that also pointed at the complexities of realism.<sup>2</sup> Psycho-analytically oriented film semioticians have framed the film experience or filmic state in terms of illusion and (disembodied) reality (e.g., Metz 1982). In the past decades, cognitive film studies have made progress in explaining the viewer's experience of reality, first by pointing at similarities between perception of the real world and perception of film images and sound.<sup>3</sup> Second, they have stressed the role of film narrative in lending unity to perceptual experiences thus contributing to an experience of realism (e.g., Cutting 2004). Film narration plays on the same attention mechanisms as used in real world perception. Typical narrative procedures such as continuity editing, smoothly mimic attentional routines used in the perception of real world scenes and thus contribute to the viewer's sense of reality (Carroll and Seely 2013; Smith 2011).

Relative to its determinants or underlying mechanisms, the contents of the film experience have received sparse attention in cognitive film studies. Perhaps it is accurate to say that what it is like to be gripped by a film is left to other disciplines and to critical film scholars whose interpretative accounts of particular films or genres cannot do without such phenomenology. This article contributes to filling this gap. It reports an attempt to analyze the experience of being engaged, or as we put it absorbed in fictional narratives in films and print.

We found relevant and promising descriptions of what it is like to be absorbed in stories in the phenomenology of literary narratives and digital media. According to Ryan's (2001) prominent view, immersion is the experience of "being in" an alternative world as if one were temporarily present in it, unmediated, sensing appropriate bodily feelings to the full, and in an unself-aware fashion. (For a related view of "being there" in film, see Tan 1996.)

Research in media psychology has spawned a wealth of related concepts capturing gripping experiences linked to narrative presence and apparent

---

realism. These concepts have been developed for the purpose of empirical measurement of immersion-like gratifications delivered by narrative in various media such as television, computer games and film. Among the concepts are presence (Wirth et al. 2007): transportation (Gerrig 1993; Green and Brock 2000): empathy, immersion, and engagement (Busselle and Bilandzic 2009). Recently we have presented an integrative analysis (Tan et al. forthcoming), proposing that what these concepts have in common is that they are high intensity experiential responses to narrative as a guided simulation (Mar and Oatley 2008) in which the viewer or reader participates. We proposed to refer to this high intensity experiential response as absorption. Tan et al. (forthcoming) examined a collection of measurement items from the media psychological research literature for their conception of the experiential nature of absorption. Implied conceptions could be summarized as a transition from the outside of a narrative to the inside. A preliminary embodied mental model for absorption was proposed, “Into Film” featuring 1) a sense of the viewer’s self being in the portrayed world, or 2) an awareness of moving from the outside of a narrative to the inside of its story.<sup>4</sup>

The scope of the mental model “Into Film” for absorption in a story-world is limited first because of its origin in a closed collection of highly standardized experience labels. These labels are used in rating scales for empirical measurement, each needed to be recognizable to large groups of viewers, readers and users of digital environments. Second, the labels were synthesized at the highest level of abstraction possible to result in one single mental model “Into Film.” This article explores the experience in more breadth, as well as depth. A range of mental models of being or moving in the narrative world was investigated, and the structure of the models considered in some detail. It used interview data from film viewers and book readers about the process of remembering, viewing or reading story scenes. The qualitative data collection was expected to allow identification of various mental models and relations among these, and to explore similarities between the models across two media; print and film. Moreover, the open data collection enabled us to capture the use of mental models as the participant engaged in the act of (re-)constructing an experience. Participants’ accounts of their experiences were analyzed using a theoretical set of candidate mental models, namely image schemata. These could be expected to reflect elements of the narrative experience other than realism or gripping-ness as well.

Thus the relevance of the study lies in its empirical contribution to a cognitive account of the contents and structure of absorbed narrative experiences.

***A preliminary embodied mental model for absorption was proposed, “Into Film” featuring 1) a sense of the viewer’s self being in the portrayed world, or 2) an awareness of moving from the outside of a narrative to the inside of its story.***

**According to cognitive linguists and psychologists, image schemata structure experience at the level of bodily perception, movement and action.**

### **Image Schemata**

The analysis of narrative experiences used a particular conceptualization of mental models. In the past 30 years cognitive linguists and cognitive psychologists have developed the notion of *image schema* (Johnson 1987; Lakoff 1987). These are mental models representing knowledge acquired in the person's interaction with the world. Freely quoting Johnson (1987) an image schema is a package of embodied knowledge, reflecting regularities, patterns and gestalts that have appeared in one's active experiences with things and events in the outside world. In contrast to propositional mental structures, image schemas are quasi-physical and multi-modally embodied, while lacking the detail and determination that "real" images have. They are more like gestalts than pictures. Johnson (1987) proposed 27 image schemas—Container, Balance, Compulsion, Blockage, Counterforce, Restraint Removal, Enablement, Attraction, Mass-Count, Path, Link, Center-Periphery, Cycle, Near-Far, Scale, Part-Whole, Merging, Splitting, Full-Empty, Matching, Superimposition, Iteration, Contact, Process, Surface, Object, Collection. Additional schemata have been proposed and identified in cognitive linguistics since (see Hampe and Grady 2005). Image schemata are not rigid templates but dynamic structures that adapt to the specificities of a given situation. Once in place they structure new experiences in order to serve comprehension. According to cognitive linguists and psychologists, image schemata structure experience at the level of bodily perception, movement and action.

As pre-conceptual models they are used by developing children as conceptual building blocks before the onset of language use (Mandler 1994). Image schemas are tools for, rather than products of, conceptualization. There is a growing body of empirical evidence that the mind uses image schemas in forming concepts and abstract meaning (e.g., Gibbs 2011; Gibbs and Colston 1995). Simple image schemas can be transformed and combined to form more complex image schemas (e.g., Gibbs and Colston 1995). For instance Source-Path-Goal is an often identified image schema consisting of a Path linked to image schemas for starting and end points, such as Start and Destination (Lakoff 1987). Finally, image schemas have also been shown to function as a basic structure in metaphors (Cienki 1998; Johnson 1987; Lakoff 1987).

The opening quote of this article demonstrates the use of image schemas in embodied understanding of film. Indeed, cognitive film scholars have recently identified and analyzed the use of image schemas outside the verbal realm in films (Coëgnarts and Kravanja 2012, 2014b; Fahlenbrach 2008; Forceville 2006; Forceville and Jeulink 2011; see also contributions of several authors to a volume edited by Coëgnarts and Kravanja 2014a). These studies show that narrative deployment of image schemas by filmmakers facilitates embodied comprehension of particular elements of the film's story-world, such as character subjectivity or emotion. In contrast, the current study aims to explore the

---

role of image schemas in the (re-)construction of the narrative experience as a whole.

The targeted experience may include understanding of story-world events and characters but has a much wider and more open focus. What we hope to discover is how image schemas are used for structuring the experience of absorption at moments that somehow stand out as intense and worth the while to remember and share. This aim inspired a few choices in our approach. First, in contrast to available studies, we did not analyze the narratives themselves, but reconstructions of (film and print) narrative experiences as to the use of image schemas. Second, we invited participants to retell their experience of narratives and moments of their own choices.

**Method**

In order to explore the use of image schemas in reconstructing experiences evoked by film as well as by written stories two-session interviews were held. According to the needs of the study we looked for persons who often experience absorption with fictional narratives and are willing to talk about their experience in a detailed manner. From 25 interviews, 18 were selected for the analysis, all with native English speakers. Prior to the interview participants were asked to list their top ten most engaging fictional narratives, either film or written stories. The first interview session explored the experience of two self-selected stories as they were remembered. In the second interview the participant was asked to retell their original experience while they viewed two segments of their own choice. The sessions lasted between 90 and 120 minutes. Verbatim protocols were derived from the interview tapes.

**Analysis: Occurrences of Image Schemas**

The measurement items used in the previous study to arrive at the global mental model “Into Film” were compared with the list of twenty-seven image schemas proposed by Johnson (1987). Four image schemas seemed to be reflected in these items, Centre-Periphery, Container, and Source-Path-Goal. In 13 interviews out of 18 we found that construals of absorbed narrative experiences contained many image schema related utterances.

In the following paragraphs, they are each briefly introduced and followed by example quotes from the interviews. For each of the reported schema, we report five to ten exemplar quotes. A more complete list can be obtained from the first author. Subsequent example quotes increase in complexity of the image schema. Table 1 shows which fictional story (in which media format) was recalled by the participant during the interview from which we selected the actual quote.

***The current study aims to explore the role of image schemas in the (re-) construction of the narrative experience as a whole.***

***In thirteen interviews out of 18 we found that construals of absorbed narrative experiences contained many image schema related utterances.***

**Table 1.** Summary of quotes as they appear in the present paper; the story title (author, year of publication) that was discussed in the quote; the medium of the story as it was referred in the interviews; and participant identification.

<i>Quote</i>	<i>Story discussed in the interview</i>	<i>Medium</i>	<i>Participant</i>
[1]	<i>High Fidelity</i> (Hornby, 1995)	Book	P24
[2]	<i>The Ministry of Pain</i> (Dubravka, 2006)	Book	P12
[3]	<i>Angel: A Hole in the World</i> (Whedon, 2004)	Film	P07
[4]; [9]; [16]; [18]; [23]; [25]; [35]	<i>Mulholland Drive</i> (Lynch, 2001)	Film	P19
[5]; [6]; [15]	<i>The Man Who Shot Liberty Valance</i> (Ford, 1962)	Film	P17
[7]	<i>Moulin Rouge</i> (Luhrmann, 2001)	Film	P07
[8]; [12]; [26]	<i>What We Talk About When We Talk About Love</i> (Carver, 1981)	Book	P22
[10]	<i>Oddkins</i> (Koontz, 1988)	Book	P16
[11]	<i>Hobbit</i> (Tolkien, 1937)	Book	P06
[13]	<i>Let the Great World Spin</i> (McCann, 2009)	Book	P20
[14]	<i>Bullet in the Brain</i> (Wolff, 1995)	Book	P16
[17]; [28]	<i>Night Train to Lisbon</i> (Mercier, 2004)	Book	P20
[19]	<i>Pan's Labyrinth</i> (del Toro, 2006)	Film	P10
[20]	<i>Disgrace</i> (Coetzee, 1999)	Book	P15
[21]; [29]	<i>Scott Pilgrim</i> (Wright, 2010)	Film	P19
[22]	<i>City of God</i> (Meirelles, 2002)	Film	P24
[24]	<i>Written on the Body</i> (Winterson, 1993)	Book	P16
[27]; [30]; [31]	<i>Austerlitz</i> (Sebald, 2001)	Book	P22
[32]; [33], [34]	<i>Mirror</i> (Tarkovsky, 1975)	Film	P18

Note: The table contains only the titles that were referred to in the selected quotes for the present paper. An exhaustive list of stories can be obtained from the first author.

**Centre-Periphery**

The basis of the Centre-Periphery schema is that one’s body is the center and gives rise to perceiving other objects as near or far relative to the center (i.e., close to the core, or the edge of one’s world). A metaphorical extension is that “in my world some things, events and persons are more important than others” so that they loom larger in experience (Johnson 1987: 124). Examples in everyday language use are, “My brother and I are very close”; and “He seemed distant.” This schema emerged regularly in the analyzed construals.

[1] “so you kind of feel a little bit closer to the character within the book.”

This viewer seems to regard the character as mattering most. Another participant experiences the story world as most important when telling about the experience:

[2] *“at that point I think I sort of felt like I had taken a step away from the story.”*

More than in [1] the use of the CP schema in [2] may also reflect the experience as a more literal spatial description if “story” is taken as “story world”

[3] *“but it felt like someone you love being pulled away from you ever so slowly, agonizingly slowly, watching someone you love being tortured and then just having her gone, it was quite horrible. I mean what was in my soul, it’s probably the best description I can give you, it’s like a massive loss.”*

Here the reference is more complex, a dynamic element being added to the image of a center and a periphery as spatial entities. In quote [3] a force moves the character from center to periphery. An even more complex conceptualization can be seen if “someone you love” is experientially “close to the self.” If so, force needs to be stronger, or opposite forces are involved (“massive”; “pulled away”).

### **Container**

The Container schema establishes in-out orientations in interactions with the world. Its experiential basis is in spatial boundedness of perceptions distinguishing an interior from an exterior space (Lakoff 1987: 272). Being held in a three-dimensional enclosure is considered a grounding experience (Johnson 1987: 21–22). Its implications include first shielding and - metaphorically protecting from external forces. Second, one’s fixing of location and restriction of movement within the enclosure—metaphorically being locked in (e.g., “She came out of her depression”). Third, ties among elements “inside” the container are metaphorically projected to convey belongingness or bonding (e.g., “He fell in love with her”; “We kicked him out of the club”; “I’d fallen out with my parents”). The quotes we found reflect the use of the schema to construct the experience as the viewer’s self being contained by the narrative. This use of the Container schema was found ubiquitous in the interviews. A first function is to convey the boundary between in and outside, and entrance of the self into the inside:

[4] *“Just yeah, more in the movie than outside the movie.”*

[5] *“Yes, so you’re in the moment, just in the film, I know people talk about switching off and that but it’s more than that, you just become involved in that film and what’s happening.”*



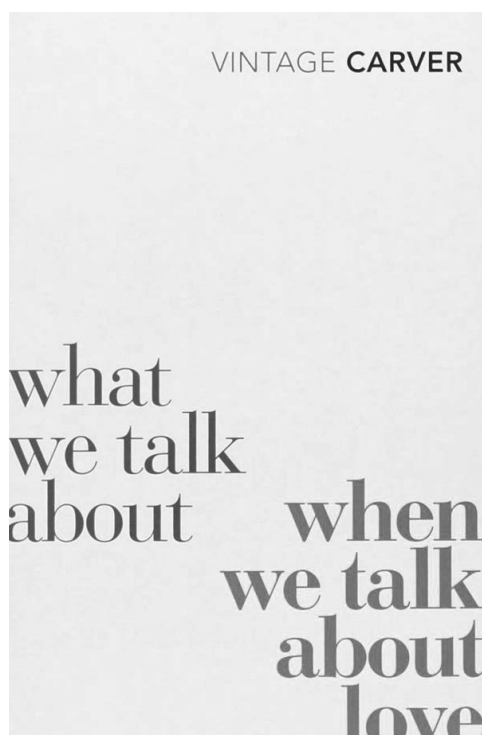


Figure 1. Front cover  
What We Talk about  
When We Talk about  
Love (Carver, 2009).

Three-dimensional enclosure of the viewer's self can be seen in [5] to [7]:

[6] *"you're just enveloped in the film so you're in the moment."*

[7] *"it holds your attention."*

A more complex use of the schema seems to add movement of the self and directionality to it:

[8] *"the deeper you get into the story the more shocking people's responses are, ... it's a descent, it really does feel like you're descending into something, and then when the story's over you get some kind of come up for air." ... "I feel like I'm sinking deeper into something."*

Another complexity is a reversal of self and film where the self contains the film.

[9] *"it's almost like a nightmare that comes in your own head."*

### Source-Path-Goal

The Source-Path-Goal schema (Johnson 1987: 113–117)<sup>5</sup> underlies our understanding of embodied motion along a trajectory, from a starting point, through a series of physical steps to an end point. By metaphorical extension involving a mapping of desired states or purposes on end points, the schema helps in understanding notions like progress, journey, and achievement, for example, "She has just started out to make a fortune"; "Jane has side-tracked in her search for self-understanding."

The schema is often used by interviewees in the construal of the self as moving from outside into the story-world.

[10] *"to get into the story."*

It seems that here the Source-Path-Goal schema is superimposed onto a Container schema. As Lakoff and Nuñez (2000) have pointed out the "into" signals a schema characterized by an interior where an endpoint is located. The endpoint is made more explicit in [11]:

[11] *"I was astounded at the way you can walk in—almost walk into a book and just live in it."*

The desirability of the end point, rendering it metaphorically a destination was made explicit in some cases:

[12] “going to a place where you had never been yet but might be curious about or had heard something about.”

[13] “The writer did a wonderful job of transporting me into the worlds of half a dozen different people, totally different from mine, outside my experience, but somehow I made them all real.”

This quote also reflects that getting close to believable characters in the story world is a desirable end state. Moreover it lends complexity to the schema as a movement from starting to end point construed as caused by an author. A similar cause is expressed in

[14] “you’re following the character”

and a variant of this is in

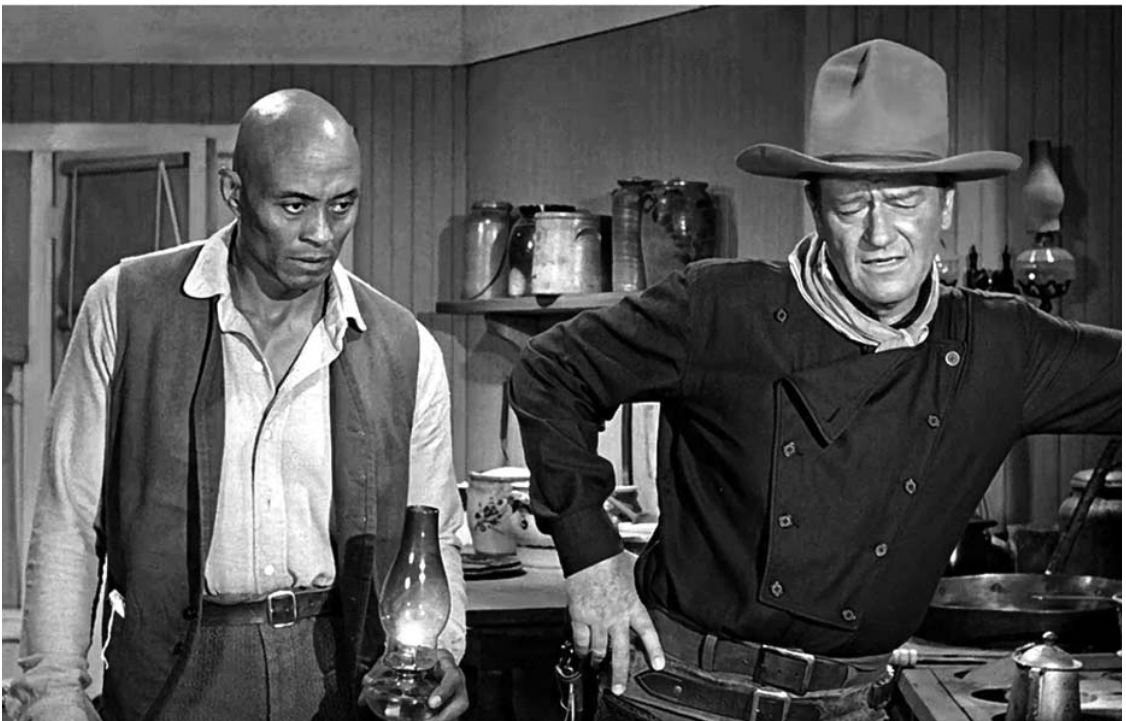
[15] “So you do feel like you’ve been on the trip with them actually.”

which explicitly metaphorizes the image schema to a journey.

### **Force**

“Force” (Johnson 1987: 42–48)<sup>6</sup> is perhaps the clearest example of the embodied nature of image schemata. It can only arise in the person’s physical interaction with the environment. Directionality and power or intensity are its main

Figure 2. The Man Who Shot Liberty Valance (1962).



features. Force is usually part of Source-Path-Goal schema: directionality is implemented through a path of motion, from a source to a target. In this way Force is the cause of motion, resulting in a sequence of initiation and actual motion through subsequent steps from source to target. Quotes from [13] to [15] above referring to a Source-Path-Goal schema appear to imply Force, [13] most explicitly (“Transport” being a transitive verb).

Force schemas have subforms including Compulsion, Blockage, Counterforce, Diversion, Removal of restraint, Enablement and Attraction (Johnson 1987). For instance, [14] suggested Attraction, and [13] Compulsion.

Also because of Force’s fit within the Source-Path-Goal schema, in the analysis instances of Force were quite common, and by far the most of these had the form of Attraction, the viewer’s self being pulled into the film.

[16] *“it does pull me in, it pulls me back in at certain points, and when I’m pulled in I can’t really pay as much attention to what’s happening.”*

[17] *“It drew me in again further, fascinated.”*

[18] *“I was so wrapped up in the movie I forgot to pause on the man itself.”*

[19] *“and I get caught up in it.”*

[20] *“it’s very gripping.”*

[21] *“that captured me in a way that some movies don’t.”*

[22] *“it kind of sucks you in.”*

[23] *“and that kind of further ties me in.”*

[24] *“being really, really hooked into the story.”*

Figure 3. Scott  
Pilgrim vs. the World  
(2010).



Several complexities were identified in the use of the Force schema. First, the mental model may be detailed beyond the mere Gestalt-like image schema such as in

[25] *"it feels like there are hooks inside my chest that are like."*

Such detailing exceeds the precision of the embodied representation of the image schema it extends upon. The extension is metaphoric as another source domain is mapped onto the primary image schema. In [25] it may be the butchery domain with templates such as meat, flesh, hooks, and knives.

Second, the role of the self vis-à-vis the cause of the motion may be represented in an embodied way starting from the Force schema.

[26] *"that I think as a reader brings you right there immediately" "... he also has a way of dragging you in."*

[27] *"travelling through time, I think, as, I don't know if that's intentional but that's what happens to me, is he takes you from one era to the next in one sentence."*

In both cases it is the author of the story that is construed as the Force causing the motion. Quote [27] exhibits a most complex use of the Source-Path-Goal schema with the author as the cause of movement within the story-world as container and the self as dependent on the author's will.

[28] *"Where is he taking me, where is the author taking me?"*

goes one step further in constructing the viewer/ reader as a helpless ("dangling") self at mercy of the author as an external force.

Ambiguity as to the role of self and the author exerting Force is suggested in

[29] *"it's completely grabbed me or I almost feel it's more internal than an external force."*

We also met with construals of an experience involving *release* or *surrender* to the author as a Force:

[30] *"And once that is there then it's very easy for me to let everything go and just feel more and more drawn in like literally like someone has a rope attached to me and they're tugging me along, then I go quite willingly, I don't really fight it."*

Here subschemas Blocking ("rope attached to me"), Counterforce ("tugging me"), and Removal of restraint ("quite willingly") with the self as the actor seem operative in a series of causal steps.

---



Figure 4: Front cover  
Austerlitz (Sebald,  
2011).

Other complex uses of the Force schema reflect the experience of *tension or conflict* in absorbed viewing or reading due to the conflict that a story-world protagonist faces:

[31] *"but he draws that, draws you into that, that scene makes you feel that, this, what I think would be the same way as the main character being confronted with that situation."*

We consider that the desirability of the Target or Goal can be ambiguous to the interviewee. Being deeply into the story-world can mean participation in a painful situation. The author's control of the viewer or reader's self is construed here as a compelling Force, and perhaps a Counterforce constituted by the viewer's or reader's reactance is implied.

It seems as though, Force is not only at the basis of the self's movement into the innermost parts of the story-world. The next quote seems to

refer to *catharsis* of some kind, featuring the self as a Container from which ("bad = heavy") contents are released. The release involves a Removal of restraint and hence Force:

[32] *"It's a very strange feeling of almost purging of things, or that you're lighter for lack of a better word."*

And a similar embodied mental model featuring forcefully letting out or venting emotions, probably in identifying with a character is in

[33] *"the emotional reaction that I had was one of not relief but just an up-roaring of emotion in general, when someone else is able to pour their feelings out, I think the natural response is to pour your own,";* and

[34] *"You feel unselfed in a way, it's an emptying out, it's not a sentimental form of crying, it's a very strange feeling, I find."*

In the latter case it is the self that is removed, and the interviewee experiences a kind of estrangement due to this removal. It can be argued that the quotes referring to a catharsis figure do not necessarily reflect Force. They can be taken to reflect a Container schema with a substance moving from inside to outside due to an unspecified cause. However, we would argue that the notion of pressure exerted from inside a container by emotional content is a widespread embodied metaphor (Kövecses 2000) for inner feeling. It can be argued



Figure 5. Mulholland Drive (2001).

in addition that [32] and [33] imply an image schema Excess, exerting force from inside to outside (see Peña 2000). We propose that it implicitly underlies the quoted constructions of outward movement that is we take purging, pouring, and emptying as involving vehement motion. These complex uses of the Force image schema are metaphoric, as they exploit another source domain, one rooted in culturally highly specific themes, such as cathartic purgation.

### ***Dynamic Containment: An Integrated Image Schema for Into Film***

The identified image schemas Centre-Periphery, Container, Source-Path-Goal, and Force appeared to intermingle in transparent ways to support the overall embodied model of absorption, with key elements of one schema being retained as elements appended to or integrated in another schema.

Notably, the Centre of the Centre-Periphery schema (the events and [dearest] characters) took the role of Goal in the Source-Path Goal schema, a destination in the middle or the deep of the Container, where the viewer's or the reader's self would be carried into by a Force. Further interpretation of the Force schema led us to surmise that the author's power as well as the destination itself (being maximally close to narrative events and characters) can also induce conflicting resistance in the self. In the end, the viewer or reader may have the experience of having been submitted to a superior power; in essence, being absorbed while also sensing their own resistance. Viewers may indeed be aware of a dynamic balance between attraction and repulsion forces in a most complex construal of their experience of absorption. Our final and lengthier quote may help illustrate the point.

[35] “at this point a little bit pulled back and I’m like okay, I know something’s going to happen. But it’s also kind of like a self-concern thing where I’m trying to watch out for myself, trying to protect myself from what I know is about to happen, which is that I’m going to be very scared, some crazy stuff’s coming around that won’t make any sense to me, but I want it to make sense, I want to try and pay more attention to the stuff that happens afterwards. But I know I’m going to have trouble with it because it comes so fast, it does pull me in, it pulls me back in at certain points, and when I’m pulled in I can’t really pay as much attention to what’s happening, and so this is all just an attempt to prepare for what I know is about to happen.”

The Container image schema by itself may properly reflect the construction of a static end point of the experience, but it definitively fails to convey the dynamics that are also part of that final experience. As we have seen, Source-Path-Goal and especially the Force schema needed to be added to Containment to represent the dynamism of absorption. A lack of dynamic features may be a more general limitation of what are now classic image schemas such as those introduced by Lakoff and Johnson, as signaled by recent studies in cognitive semantics. For instance, Dewell (2005) has pointed at precisely the shortcoming of the Container schema that we mentioned. He argues convincingly that Lakoff and Johnson’s Containment schema falls short in incorporating the dynamics that led to the final static containment, even though traces of these are part of common structuring of relevant experiences. Dewell’s Dynamic Containment image schema seems quite fit to integrate the experiences reported in this study and do justice to the interplay of forces that lead to being absorbed in the story world. Figure 6 presents the Dynamic Containment schema. It consists of an Entry and an Enclosure event. The construction of Entry is always part of experiences of Containment. If we discover that a box contains an object, it is not only construed as having a static location in relation to an outside, but also there is an immediate awareness of the object having entered into the Container at some time. In addition, Dewell (2005) argues that Containers need not to be rigid three-dimensional shapes; they can also have flexible boundaries, for example bags and sacks. Some Containers have receptacles, for which a hand holding an object is the paramount example. Such shapes are typically experienced as actively enclosing the object by bending and closing in on the object and on itself, see the dashed arrows in Figure 6. English verbs according to Dewell (2005) describe the image “as . . . *grab, grasp, catch, enclose, or surround*.” As we have seen, similar verbs were used to describe experiences of absorption in narrative and film (e.g., in [18]–[21]). The experience of being absorbed in a fictional narrative could thus be constructed in a most efficient manner using the Dynamic Containment image schema as

---

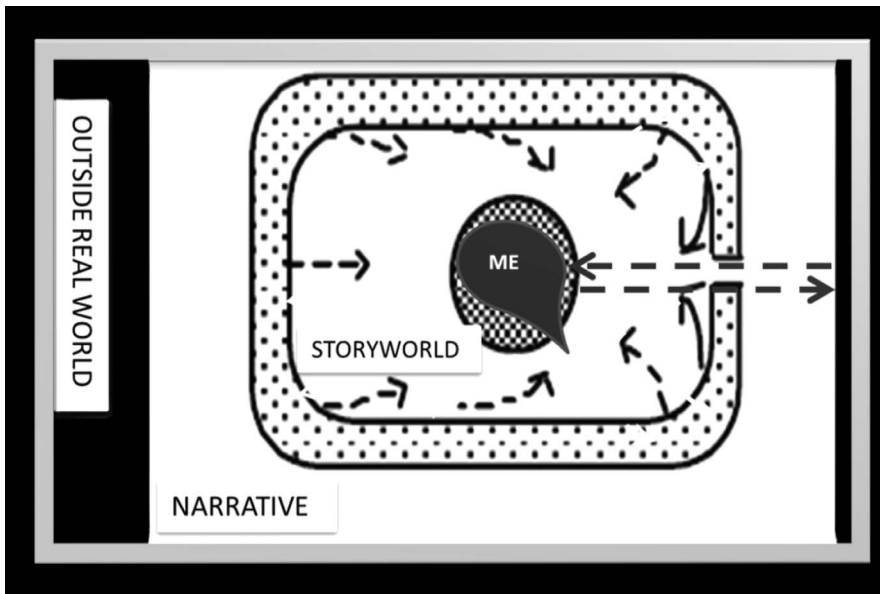


Figure 6. Construal of Experience of Absorption Using Dynamic Containment Image Schema. Adapted from Dewell (2005).

the viewer's or reader's self having entered the story-world and being enclosed in it due to an active Force. We believe that the dynamics of Containment also include an awareness of a future or possible exit, accommodating the tendency experienced by at least some recipients to flee from the grip of the narrative or the author. Moreover, viewer or reader resistance to Enclosure could also be represented within the same image schema as Forces emanating from the self that counter enclosure through the Container's receptacles. An example of such instances might be (the prospect of) situations in the story-world which repel the reader (see [30], [31]). Such specific resistances could be represented as curved dashed arrows parallel to the enclosure forces, but pointing towards the Container receptacles or boundaries instead of to the self.

Finally, we believe that the Dynamic Containment image schema is ideal for capturing a *Dynamic Balance* between experienced Enclosure forces and counterforces emanating from the viewer's and reader's self. This is construed as a compromise between forces, resulting in the self settling on a temporary destination in the story-world. The viewer/ reader has resisted the author's Force and then surrendered to it (e.g., [31]). The perfect sense is used to capture the essence of Dynamic Balance. It is a balance between forces and counterforces rather than absence of forces.

## Discussion

### *What Is It Like to Be Absorbed in a Narrative?*

We identified a number of image schemata in interviewee construals of the experience of being absorbed in a fictional narrative. Combining one person's

***The Dynamic Containment image schema is ideal for capturing a Dynamic Balance between experienced Enclosure forces and counterforces emanating from the viewer's and reader's self.***



***The viewer's or reader's self travels into the center of the narrative, the story-world it portrays.***

construal with another's we arrived at an image schematic experiential model of absorption summarized as Dynamic Containment (see Figure 6). Summarizing the model in words, the viewer's or reader's self travels into the center of the narrative, the story-world it portrays. The self wants to be there, exerting force, and is taken there in some cases notably by the author. Conflicting tendencies may or may not arise. In the former case the self pushes towards the exit, while another force, possibly the author, pulls it back.

***Related Work***

We believe that the observed construction of absorption in fictional narrative is consistent with an account of narrative as a simulation (Mar and Oatley 2008; see also Tan et al. forthcoming). We believe that construals betray a partial awareness of the mechanism. Simulation seems to be experienced, first of all, as being absorbed into another reality. In some cases the instance responsible for one's interaction with narrative world may be part of the experience, pointing at the possibility that the simulation as such can be accessible to introspection.

The observed image schemata are related to previously proposed conceptualizations of narrative absorption. First, they are at the basis of conceptualizations of absorption used in media psychology for the construction of instruments capturing typical states of engagement with narrative. Containment seems to underlie "presence" (Slater et al. 1994), while "transportation" (Gerrig 1993; Green and Brock 2000) reflects schemas Source-Path-Goal and Force. This is not surprising as we used the analysis of these experiential concepts to orient the initial search for image schemata. Second, the most conspicuous similarities of the model seem to us those with Ryan's (2001) account of the phenomenology of immersion as "being in" the narrative. A difference in degree is that reference to the self's activity in manipulating the procedures of narration and co-creation of the narrative as an artefact were less prominent than expected if the interviewee were immersed in the narrative rather than the story-world. Participants in the current study made no mention of any particular image schema for such reference. Construals of absorption in the artefact merit quite another analysis which in fact will be reported in Bálint and Hakemulder (forthcoming).

***Image Schemata and Beyond: Cognition and Affect in Narrative Absorption***

In answer to the question how people construct the experience of being absorbed in fictional narratives (cinematic or print), we found that use is made of general mental models that highlight key experiential features of routine interactions with things and events in the world. The shared "language of experience" seemed to provide the means for constructing people's experiences in a compact fashion and in a manner most accessible to the listener. We conclude that resulting construals appeared to make use of image sche-

---

mas, and reflect the essential non-propositional dimensions of these (Johnson 1987). First, construals were found to be spatial. The experience of absorption involves positioning the self within a three-dimensional spatial framework as subject to Containment. Second, construals were found to be embodied. Containment reflected the image of the self's body being both constrained in terms of position and movement, and subject to an origin of forces. The use of the Centre-Periphery schema defined the body as the center of the world, Source-Path-Goal involved trajectories of the bodies through space, and Forces were exerted on the self's body in the first place. Third, construals exhibited dynamism. The most encompassing model of the construals features spatial transitions across time brought about partly by opposite forces.

Spatial, embodied, and dynamic features lend cognitive structure to the narrative experience drawing from the realm of physics as a source domain. However given our aim to assess the use of image schemata in the construal of absorbing or gripping experiences, the question arises whether and how affect is represented in the construals. Moreover, given the present state of scholarly knowledge on the experience of narrative film it would be incredible if affect would not be a key element of the reported experiences (see, e.g., Carroll 1999; Grodal 1999, 2009; Plantinga 2009; Smith 2011; Tan 1996). We did indeed find distinctly affective qualities to the experience as reported by the interviewees, but these were not represented through one of the image schemata introduced by Lakoff and Johnson. We believe that in the construal of these metaphorical projections took place of elements from physics-inspired image schemata onto the affective domain. As we have seen, the experience of story-world events and characters as the (affectively positive) entities that really mattered was given shape by metaphorically mapping physical distance from events and characters on to a desire to be with these ("closer to the character"), and mapping Goal or destination on to a desirability of settling in the midst of story-world events and characters.<sup>7</sup> The interviews in this study can be analyzed exploring the use of space, brightness and size schemata, in future studies of emotional experience construals. It would seem from the currently identified examples that Force as a physical and embodied source schema, too, is apt to be metaphorically mapped on to targeted emotional intensity. If so, it would constitute an example of an emotion metaphor proposed by Kövecses (2000)—emotion is a mechanical force—exemplified in our case by "drew me in", or "dragged me in." Filling in further details of the representation going beyond the Gestalt nature of the Force image schema also adds to affective aspects of absorption through embodied simulations of feeling ("hooks in my chest").

The most general way in which image schemata were used to construe affective experiences was the fact that the viewer's and reader's self played the lead role in the image schemata. The experience was not of something being contained but of the self being in a container. Technically speaking the

self is mapped onto the *trajectory* role in image schemata like Source-Path-Goal, Container and Center-Periphery and subject to or origin of Force. On top of these affective qualities of the self's trajectory into the story-world, at least in some cases, a rather basic affective relation transpired through construals, namely when a Force behind the viewer's trajectory was mapped onto the persona of the author. Affective qualities of the relation between the viewer's self and the author were highlighted by metaphorically mapping the author's physical power and the viewer being its physical object onto the latter's feeling of helplessness ("Where is he taking me?").

We believe that the Dynamic Containment schema is excellently suited for a rich set of metaphorical mappings onto the affective experience of absorption. Because of its complete, overview-like representation of the interplay of a variety of Forces, it allows for a number of ways to zoom in on particular emotional experiences spawning a metaphor apt to each one. Here the modelling of construals goes beyond the traditional image schema framework. Dynamic Containment does not only represent dynamics in story or real world scenes, but as Dewell (2005) implies it can act as a blueprint for dynamic simulations of an experience, as an ongoing process. In the process viewers and readers zoom in on one or other aspect of the constructed experience retrieving or playing from memory their perceptions, bodily feelings and affective reactions. This model fits in more recent conceptualizations of the reconstruction of embodied experiences. Here we have to mention especially Barsalou's (1999) perceptual simulation theory as it seems to set image schemas within a more encompassing psychological view of the embodied construction of experiences.<sup>8</sup>

## **Limitations of the Study**

### ***Image Schema***

The reference set of image schemata from Lakoff, Johnson, and Dewell obviously has its limitations in qualifying the experience of absorption. Although we are struck by the range and depth of the experience as it could be construed using these, we did not consider alternative mental models, for instance embodied schemata comprising experiences with other sensory modalities such as sound, taste, touch, and smell, although we hinted at the possibility to consider these as details specifying the mental model beyond the image schema as a Gestalt.

We have not explicitly categorized the mental models that we identified as metaphors. However, image schemas as they are commonly conceived of (e.g., Johnson 1987) are metaphors. That is they map a source domain onto a target from another domain. Image schemas are used to map concrete bodily and spatial experiences onto more abstract concepts, and this is how they are used in construing absorption, as we hope we showed. In the reports of the use of particular image schemas, we also noted instances of metaphorical extension. Some construals testified to building on a given image schema "A,"

---

another image schema or a concept “B” from another (embodied) source domain. However, an important limitation is that we did not consider the use of conventional cultural metaphors. Such alternative instruments for construing absorption experiences are in need of further study. It would seem to us that the interview data that we used can also be analyzed from such complementary model perspectives. Finally, the data may also be analyzed to identify image schemata other than those used for constructing absorption. As one of our reviewers suggested, other mental models may be used in construals of cognitive or knowledge-related experiences (for instance the conceptual metaphor Understanding Is Seeing; Lakoff and Johnson 1980) and such models may be intimately related to experiences of absorption.

### ***Narrative Media: Text and Film(s)***

A possible limitation of the study is that participants related their absorbing experiences in response to either narrative films or written stories. A separate detailed analysis of the interviews could shed a more conclusive light in the issue on the media specificity of absorption. However, in going through all protocols we were struck by the absence of differences. That is the image schemata that we identified ran across the experiences with both media. Although the details of their construals did refer to either language or moving image cues, specific experiences of being absorbed were cast in the same mental models, to the point where we decided to drop the distinction between the stimuli from the analysis. Obviously a single study such as this can only hint at similarity of absorption experiences across media, but we would suggest that our case testifies to the use of one multimodal “language of experience” for construing what it is like to be absorbed in a narrative. Nonetheless it seems obvious that when similar image schemata are being used, the content of construals may differ from one medium to another, and more so than this analysis has demonstrated. Other scholars have already pointed at differences. Ryan (2001) dealt with differences in immersive experiences afforded by the use of interactive virtual reality media on the one hand and narrative texts on the other. Rogers (2013) in her critical analyses of the experience of new film technologies pointed at the different phenomenology of absorption in digital film, widescreen and 3D films, highlighting experiences of attraction and repulsion, and adding, it seems to us an image schema for “internalization” where the viewer construes images being projected inside their mind.

### ***(Re-)construction of Experience***

We have used verbalizations of what it is like to be absorbed in a story treating these as reconstructions of an experience in the first place. Participants told us about what they went through at an earlier time when watching or reading a narrative. A possible limitation then is that the reconstruction is not true to

---

the original experience. However, this threat to validity is limited by the fact that interviewees had direct access to the film or story fragment they reported their experience of. They often did not distinguish between an original and a present experiences, using present tense throughout the retelling. Obviously, we could not make out when retold experiences were in some way mashed up with recollected ones. Our methodological starting point in the analyses was is that the reports accounted for construals and thus reflected the process of construction of experiences, rather than a kind of root memories of these. For instance, we believe that participants did not so much remember image schemata as models of their previous experience; instead the schemas were piecemeal retrieved from memory and used on the spot to build a mental representation of the experience. On this view, the difference between construction and reconstruction is gradual rather than categorical. It should be added that the particular construals that we analyzed did not only serve the structuring of experience itself, but also to communicate the experience to the researcher-interviewer. Thus it may be argued that the use of image schemata is a by-product of the social situation, requiring representations that can be easily grasped by a listener. However, we feel that image schemata because of their embodied and Gestalt-like nature can be used both for privately structuring one's experience and conveying it to others. And indeed in some conceptualizations of consciousness, experience is structured as an outcome of a narration by the self to imaginary others (e.g., Oatley's [2007] "Meadean" consciousness, so dubbed following George Herbert Mead's theory of the essentially social self). Within such a conception, the interview situation would allow for experiences to be constructed in a dialogue, somehow intensifying or crystallizing out what it would be in private.

A related limitation of the used interview method is in its verbal nature. A very concrete threat to the validity of results and our interpretations is that the identified image schemata were an artefact of the use of language in self-reports that were our data. Because cognitive linguists have used verbal cues as the primordial evidence of the existence and operation of image schemata, it seems possible that the emergence of these images in self-reports was inherent in their use of language, while the actual construal of experience involved quite different mental models or structures, for instance Barsalou's (1999) perceptual simulators. This threat to validity is constrained we believe by the credibility of a basic claim made by cognitive linguists and cognitive psychologists that image schemata are pre-conceptual and acquired before the use of language.<sup>9</sup> Nonetheless we feel that additional research of construals of the experience of narrative absorption using non-verbal instruments for capturing it is both necessary and possible. There are already examples of studies using computer interfaces for drawing representation and manipulating graphic models of image schemas (Richardson et al. 2001). We can also think

---

of interview studies like ours recording gestures along with speech, allowing for analyses like the one in the opening quote of this article (“both hands push down a large round object”). It also seems feasible to assist test participants watching a movie or reading a story in real-time construal, by providing them with a flexible 3D object model of the Dynamic Force schema as in Figure 6 that they can manipulate with their hands, say a semi-transparent elastic bag with objects inside attached to the inside of the bag through rubber straps.

### ***Selection of Participants and Narrative Titles***

Finally, this empirical account of the use of image schemata in construals of absorption in narrative is constrained by features of the particular participants and the particular narrative contents they had selected. Participants were selected for the study because of their affinity with film or literature and their ability to relate on their experience. Higher level of education ensured reporting capabilities, whereas the long-list of title preferences testified to special affinity for literary narrative and art house film. Only larger scale studies recruiting from larger audiences can shed light on the implications of the current selection. However we would argue that such shared and pre-lingual mental models as image schemata observed in this study may be of use in virtually everyone’s construals of narrative experiences, although individual and sub-cultural varieties can still abound. The same would go for an objection with regards to the selection of narrative titles. Narratives from different genres and individual titles within genres may invoke a wide variety of construals, but we speculate that there will be some basic communality underlying these. They would include the Source-Path-Goal schema for representing transition of the self from being in the real world to being contained in a story-world while subject to Forces. It is in the Dynamic Balance experienced at the Goal location that we would expect title (or genre) and individual differences to show up. The particular interplay of forces such as Attraction and Repulsion may differ greatly for one title (genre) and person compared to others.<sup>10</sup> As this study may illustrate, studying the experience of particular titles by particular individuals is not only feasible but also necessary for a better and richer understanding of absorption and its varieties.

### ***Determinants of Narrative Absorption***

A final shortcoming of the study is due to its very scope and approach. As stated at the outset, the reported study deals with the *contents* of the experience of absorption, and not with stimulus features responsible for it. We cannot explain what the causes are of the use of identified image schemas. The data collection was geared towards probing deeply into the experience of absorption. In the interviews participants were instructed and encouraged to introspect on their experience. As a consequence, they did not focus on film or textual

---

features assumed to be responsible for the particular experience, such as stylistic details or narrative procedures. Such an analytic attitude would need to be induced in future studies aiming to identify causes in the film stimulus of absorption. Obviously, causes and mechanisms underlying the experience or its construction using image schemata, could best be addressed in experimental research, systematically varying narrative and film features.<sup>11</sup> Such experiments may be informed, on the one hand, by available analyses of narrative and film features that are analytically associated with image schemas and embodied metaphors (e.g., Coëgnarts and Kravanja 2014a; Fahlenbrach 2008; and Forceville 2006). On the other hand, mechanisms that contribute to smooth embodied simulation of story events, hinted at in the introduction, could be taken as a starting point for experimental tests. For instance narrative procedures like condensation and focalization, or stylistic ones such as continuity editing may be manipulated in order to observe effects on attention, processing fluency and absorption.

### Conclusion

To conclude, we have identified the use of a general class of self-oriented embodied mental models for the qualification of absorption in a fictional narrative. The findings are in line with accounts of narrative as simulations running on the mind and body of recipients. What they add to this current understanding of the narrative experience is an immediate account of what it is like to get absorbed “into film” or a book. The account points to the embodied and personal nature of narrative absorption as a reason for its attractiveness.

---

**Katalin Bálint** is a post-doctoral researcher at the University of Augsburg, Department of Media, Knowledge, and Communication. Previously, she conducted research into the subjective experience of absorbing fictional narratives at Utrecht University. Her interest is centered on the processes and determinants of character engagement, and the mindreading response in particular. Her doctoral thesis concerns the interaction of focalization and attachment style in empathy responses to narrative films.

**Ed S. Tan** is a professor of Media Entertainment at the University of Amsterdam, Amsterdam School of Communication Research. He has conducted psychological research into film, television, theatre, games, narrative and the arts. Among his publications are *Emotion and the Structure of Narrative Film* (1996) and *The Empathic Animal Meets the Inquisitive Animal in the Cinema* (2013). He has a special interest in the communicative, emotional and cinematic competence that film viewers have acquired in regular watching and that they put to use for appreciating film.

---

## Notes

<sup>1</sup> The names of the authors are in alphabetical order. The project *Varieties of Absorption* this article reports on was funded by the Netherlands Organization for Scientific Research (No. 360-30-203). We would like to thank for Brendan Rooney's assistance in the proofreading.

<sup>2</sup> The film experience according to some theorists is basically paradoxical as it couples apparent realism with cues that seem to contradict realism (e.g., Arnheim 1933; Bazin 1967; Michotte 1948).

<sup>3</sup> Anderson (1996) proposed that perceptual affordances presented by the moving image are similar to those afforded by the real world, and this similarity makes for apparent reality. Grodal (2009) elaborated the role of general neural systems in viewer responses to film that are similar to responses to real world scenes.

<sup>4</sup> Another mental model for high-intensity experiences of being absorbed not in the story-world but in the narrative as an aesthetic artifact, "Foregrounding," was also proposed as a complement to "Into Film." This type of absorption is not analyzed in this article (see Bálint and Hakemulder forthcoming). In a similar vein Ryan (2001) distinguished immersion in the represented world, which is associated with the recipient's attention to the represented, from engagement in the narrative as an artefact associated with attending to and manipulating the means it creates meaning by.

<sup>5</sup> The Source-Path-Goal schema's label is abbreviated to Path in Johnson (1987). The full name appears in later work by Johnson and others, see Hampe and Grady (2005).

<sup>6</sup> The Force schema is extensively discussed by Johnson (1987: 126) under this name although it is redubbed Counterforce in his list of major schemata.

<sup>7</sup> In line with this proposal Crawford (2009) has shown that distance to desirability mapping is a quite common procedure in emotion metaphors. She has suggested that not only the embodied experience of distance but also of space, brightness, and size are effectively used to emphasize aspects of emotion because the target, emotion, is by itself already a pervasively embodied concept.

<sup>8</sup> On this account the use of mental models, for example, in (re-)constructing an experience involves an embodied simulation that draws on perceptual simulators retrieved from memory for the simulation. Simulators have been, so to speak, recorded from perceptual experiences, so that they retain their original sensory and affective qualities (see also Barsalou et al. 2003). Thus they go beyond the Gestalt-like representation typical of image schemata.

<sup>9</sup> See, for example, Mandler (2012) for a nuanced discussion of the use of Containment, Path-Goal and a precursor of Force in children under eight months.

<sup>10</sup> For a recent proposal on how genre-related forms of narration give rise to differential narrativizing activity and related embodied experiences see Kiss (forthcoming).

<sup>11</sup> About the narrative determinants of absorption see, for example, Bálint et al. (2014); and Doicaru et al. (forthcoming).

## References

- Anderson, Joseph D. 1996. *The Reality of Illusion*. Carbondale: Southern Illinois University Press
- Arnheim, Rudolf. 1933. *Film*. London: Faber and Faber.
- Bálint, Katalin, Miruna Doicaru, and Ed S. Tan. 2014. "Anatomy of Suspense. Dissecting a Case of the Film Experience." *Metropolis* 18(2): 40–49. (In Hungarian.)



- Bálint, Katalin, and Frank Hakemulder. Forthcoming. "The Phenomenology of the Fore-grounding Experience." In *Handbook of Absorption*, ed. Frank Hakemulder, Ed S. Tan, Katalin Bálint, Moniek Kuijpers, and Miruna Doicaru.
- Barsalou, Lawrence W. 1999. "Perceptual Symbol Systems." *Behavioral and Brain Sciences* 22: 577–660.
- Barsalou, Lawrence W., Paula M Niedenthal, Aron K. Barbey, and Jennifer A. Ruppert. 2003. "Social Embodiment." Pp. 43–92 in *The Psychology of Learning and Motivation: Advances in Research and Theory*, ed. Brian H. Ross. San Diego: Academic Press. doi:10.1016/S0079-7421(03)01011-9/
- Bazin, André. 1967. *What Is Cinema?* Trans. Hugh Gray. Berkeley: University of California Press.
- Busselle, Rick, and Helena Bilandzic. 2009. "Measuring Narrative Engagement." *Media Psychology* 12(4): 321–347, doi: 10.1080/15213260903287259.
- Carroll, Noël. 1999. "Film, Emotion, and Genre." Pp. 21–47 in *Passionate Views: Film Cognition, and Emotion*, ed. Carl Plantinga and Greg M. Smith. Baltimore: Johns Hopkins University Press.
- Carroll, Noël, and William P. Seeley. 2013. "Cognitivism, Psychology, and Neuroscience: Movies as Attentional Engines." Pp. 53–75 in *Psychocinematics*, ed. Arthur P. Shimamura. Oxford Scholarship. doi: <http://dx.doi.org/10.1093/acprof:oso/9780199862139.003.0003>.
- Carver, Raymond. 2009. *What We Talk about When We Talk about Love*. London: Vintage Books.
- Cienki, Alan. 1998. "STRAIGHT: An Image Schema and its Metaphorical Extensions." *Cognitive Linguistics (includes Cognitive Linguistic Bibliography)* 9(2): 107–149, doi: 10.1515/cogl.1998.9.2.107.
- Coëgnarts, Maarten, and Peter Kravanja. 2012. "Embodied Visual Meaning: Image Schemas in Film." *Projections: The Journal of Movies and Mind* 6(2): 84–101, doi: <http://dx.doi.org/10.3167/proj.2012.060206>.
- Coëgnarts, Maarten, und Peter Kravanja, eds. 2014a. "Metaphor, Bodily Meaning, and Cinema." *Image & Narrative* 15(1).
- Coëgnarts, Maarten, and Peter Kravanja. 2014b. "A Study in Cinematic Subjectivity. Metaphors of Perception in Film." *Metaphor and the Social World* 4(2): 149–173.
- Crawford, L. Elizabeth. 2009. "Conceptual Metaphors of Affect." *Emotion Review* 1(2): 129–139, doi: 10.1177/1754073908100438.
- Cutting, James E. 2004. "Perceiving Scenes in Film and in the World." Pp. 9–27 in *Moving Image Theory. Ecological Considerations*, ed. Joseph D. Anderson and Barbara F. Anderson. Carbondale: Southern Illinois Press.
- Dewell, Robert B. 2005. "Dynamic Patterns of CONTAINMENT." Pp. 369–393 in *From Perception to Meaning: Image Schemas in Cognitive Linguistics*, ed. Beate Hampe and Joseph E. Grady. Berlin: Walter De Gruyter.
- Fahlenbrach, Kathrin. 2008. "Emotions in Sound: Audiovisual Metaphors in the Sound Design of Narrative Films." *Projections* 2(2): 85–103, doi: 10.3167/proj.2008.020206.
- Forceville, Charles. 2006. "The Source-Path-Goal Schema in The Autobiographical Journey Documentary: Mcelwee, van der Keuken, Cole." *New Review of Film and Television Studies* 4(3): 241–261.
- Forceville, Charles, and Marloes Jeulink. 2011. "The Flesh and Blood of Embodied Understanding: The Source-Path-Goal Schema in Animation Film." *Pragmatics & Cognition* 19(1): 37–59, doi: 10.1075/pc.19.1.02for.
- Gerrig, Richard J. 1993. *Experiencing Narrative Worlds*. New Haven, CT: Yale University Press.
- Gibbs, Raymond W. 2011. "Evaluating Conceptual Metaphor Theory." *Discourse Processes* 48(8): 529–562, doi: 10.1080/0163853X.2011.606103.
-

- Gibbs, Raymond W., and Herbert L. Colston. 1995. "The Cognitive Psychological Reality of Image Schemas and Their Transformations." *Cognitive linguistics* 6(4): 347–378.
- Green, Melanie C., and Timothy C. Brock. 2000. "The Role of Transportation in The Persuasiveness of Public Narratives." *Journal of Personality and Social Psychology* 79(5): 701–721, doi: <http://dx.doi.org/10.1037/0022-3514.79.5.701>.
- Grodal, Torben. 1999. *Moving Pictures: A New Theory of Film Genres, Feelings, and Cognition*. Oxford: Oxford University Press.
- Grodal, Torben. 2009. *Embodied Visions*. Oxford: Oxford University Press.
- Hampe, Beate, and Joseph E. Grady. 2005. *From Perception to Meaning: Image Schemas in Cognitive Linguistics*. Bd. 29. Berlin: Walter de Gruyter.
- Johnson, Mark. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: University of Chicago Press.
- Kiss, Miklós. Forthcoming. "Film Narrative and Embodied Cognition: The Impact of Image Schemas on Narrative Form." In *Embodied Cognition and Cinema*, eds. Maarten Coëgnarts and Peter Kravanja. Leuven: Leuven University Press.
- Kövecses, Zoltan. 2000. *Metaphor and Emotion: Language, Culture, and Body in Human Feeling*. Cambridge: Cambridge University Press.
- Lakoff, George. 1987. *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*. Chicago: University of Chicago Press.
- Lakoff, George, and Johnson, Mark. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lakoff, George, and Rafael E. Nuñez, R. 2000. *Where Mathematics Comes From: How the Embodied Mind Brings Mathematics into Being*. New York: Basic Books.
- Mandler, Jean Matter. 1994. "Precursors of Linguistic Knowledge." *Philosophical Transactions of the Royal Society of London, Series B*, 346(1315), 63–69.
- Mandler, Jean Matter. 2012. "On the Spatial Foundations of the Conceptual System and Its Enrichment." *Cognitive Science* 36(3): 421–451, doi: 10.1111/j.1551-6709.2012.01241.x.
- Mar, Raymond A., and Keith Oatley. 2008. "The Function of Fiction Is the Abstraction and Simulation of Social Experience." *Perspectives on Psychological Science* 3(3): 173–192, doi: 10.1111/j.1745-6924.2008.00073.x.
- McNeill, David. 1992. *Hand and Mind: What Gestures Reveal about Thought*. Chicago: University of Chicago Press.
- Metz, Christian. 1982. *The Imaginary Signifier: Psychoanalysis and the Cinema*. Bloomington: Indiana University Press.
- Michotte, Albert. 1948. "Le caractère de 'réalité' des projections cinématographiques." *Revue Internationale de Filmologie* 1: 249–261.
- Oatley, Keith. 2007. "Narrative Modes of Consciousness and Selfhood." Pp. 375–402 in *The Cambridge Handbook of Consciousness*, ed., Philip David Zelazo, Morris Moscovitch, and Evan Thompson. New York: Cambridge University Press.
- Peña, Sandra. 2000. "A Cognitive Approach to the Image-Schematic Component in the Metaphorical Expression of Emotions in English." PhD diss., University of La Rioja.
- Plantinga, Carl. 2009. *Moving Viewers: American Film and the Spectator's Experience*. Berkeley: University of California Press.
- Richardson, C. Daniel, Michael J. Spivey, Shimon Edelman, and Adam J. Naples. 2001. "Language Is Spatial, Experimental Evidence for Image Schemas of Concrete and Abstract Verbs." Pp. 873–878 in *Proceedings of the 23rd Annual Meeting of the Cognitive Science Society*. Mahwah, NJ: Erlbaum.

- Rogers, Ariel. 2013. *Cinematic Appeals. The Experience of New Media Technologies*. New York: Columbia University Press.
- Ryan, Marie-Laure. 2001. *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Baltimore: Johns Hopkins University Press.
- Sebald, Winfried Georg. 2011. *Austerlitz*. New York: Modern Library.
- Slater, Mel, Martin Usoh, and Anthony Steed. 1994. "Depth of Presence in Virtual Environments." *Presence* 3(2): 130–144.
- Smith, Murray. 2011. "Empathy, Expansionism, and the Extended Mind." Pp. 99–117 in *Empathy: Philosophical and Psychological Perspectives*, ed. Amy Coplan and Peter Goldie. Oxford: Oxford University Press.
- Tan, Ed S. 1996. *Emotion and the Structure of Narrative Film*. Mahwah, NJ: Lawrence Erlbaum.
- Tan, Ed S., Frank Hakemulder, Katalin Bálint, Miruna Docaru, and Moniek Kuijpers. Forthcoming. "Into Film. A Simulation Account of Absorption in Viewing Narrative Film" In *Handbook of Absorption*, ed. Frank Hakemulder, Ed S. Tan, Katalin Balint, Moniek Kuijpers, and Miruna Doicaru.
- Wirth, Werner, Tilo Hartmann, Saskia Böcking, Peter Vorderer, Christoph Klimmt, Holger Schramm, Timo Saari, et al. 2007. "A Process Model of the Formation of Spatial Presence Experiences." *Media Psychology* 9(3): 493–525, doi: 10.1080/15213260701283079.
-